ERNE

The EDRN Resource Network Exchange

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ERNE

- Flagship informatics application

  - JPL's first involvement with EDRN

  - Coordination between DMCC, JPL, NCI, and participating sites

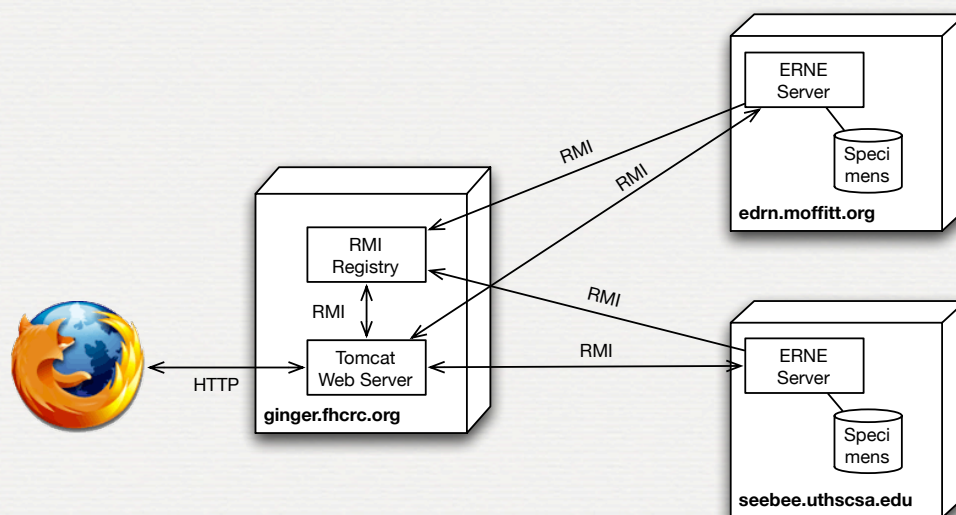- Possibly the *earliest* virtual specimen bank, ever

CURRENT STATUS

An architecture of change

ERNE: THEN

- Mockup

- Two sites

  - H. Lee Moffitt Cancer Center

  - University of Texas Health Sciences Center, San Antonio

INITIAL ARCHITECTURE

COMPLEXITY

- Extra components

  - Extra configuration

- Extra points of failure

  - RMI registry: centralized lookup of software components
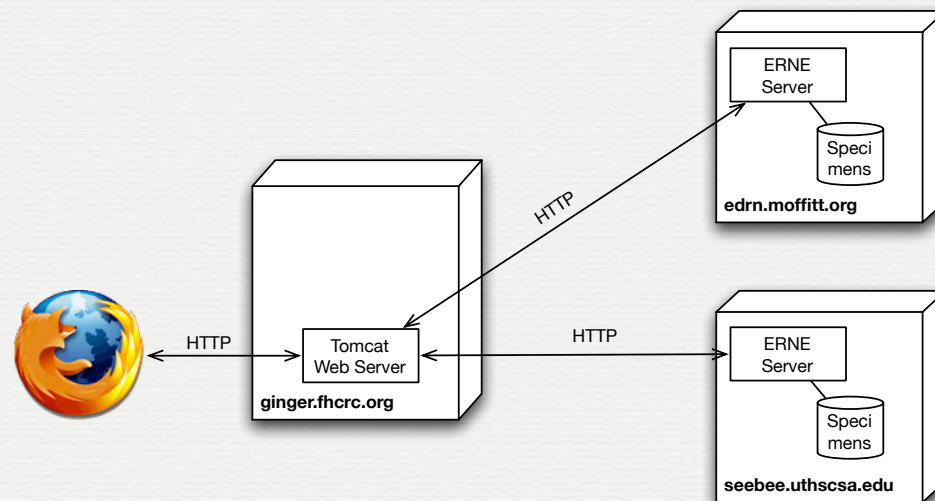
    - They practically never moved!

SECURITY

- RMI over TLS

    - Additional code

    - Multiple encryption certificates

E-COMMERCE

- HTTPS

  - Representational State Transfer: REST

    - https://some.host/some.resource?some.constraint=some.value

      - Return: account balance, magazine subscription, specimen results
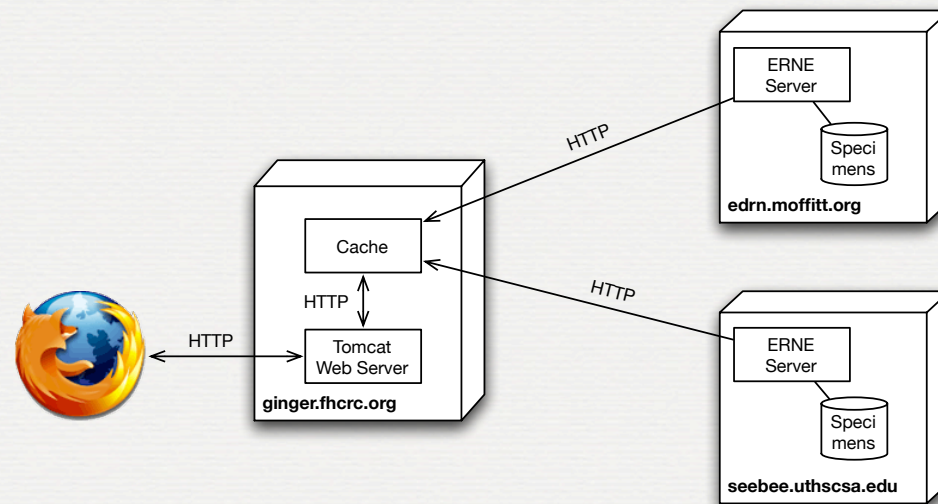
        - As plain text, image, XML, HTML, or whatever

SIMPLIFIED

SPEED AND RELIABILITY

- Original IRB

  - No copying of data

  - Query only, view ephemeral results
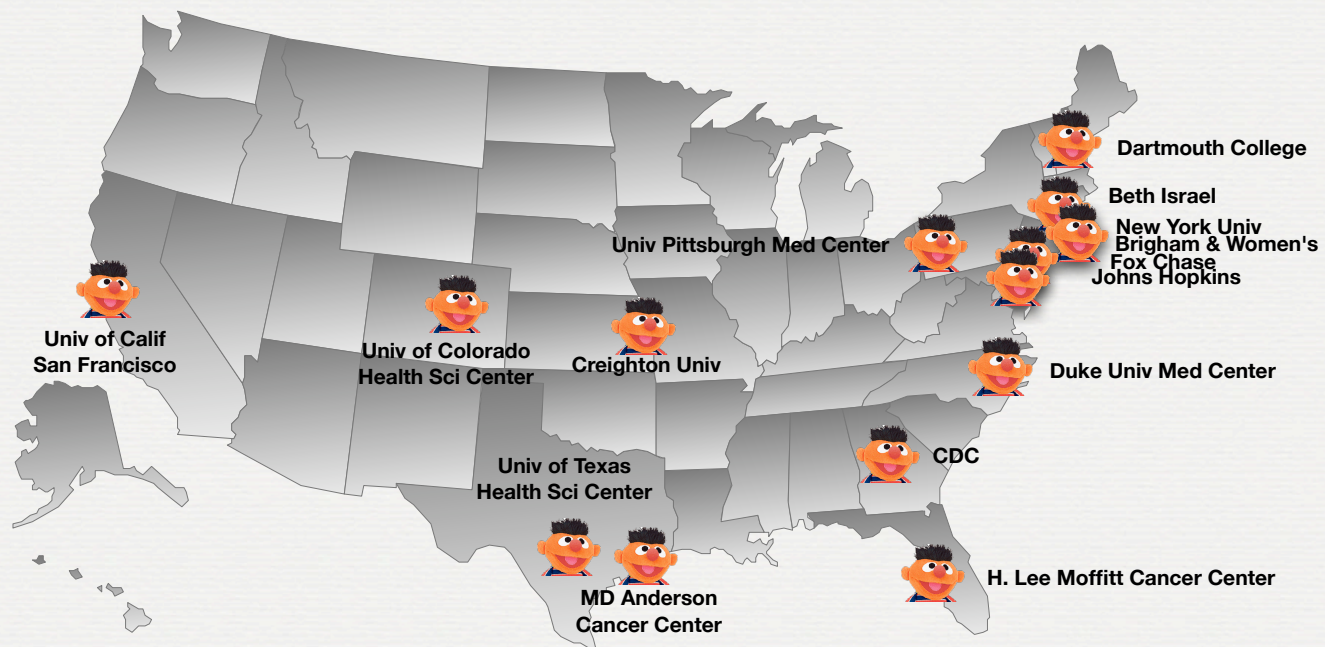
- New IRB

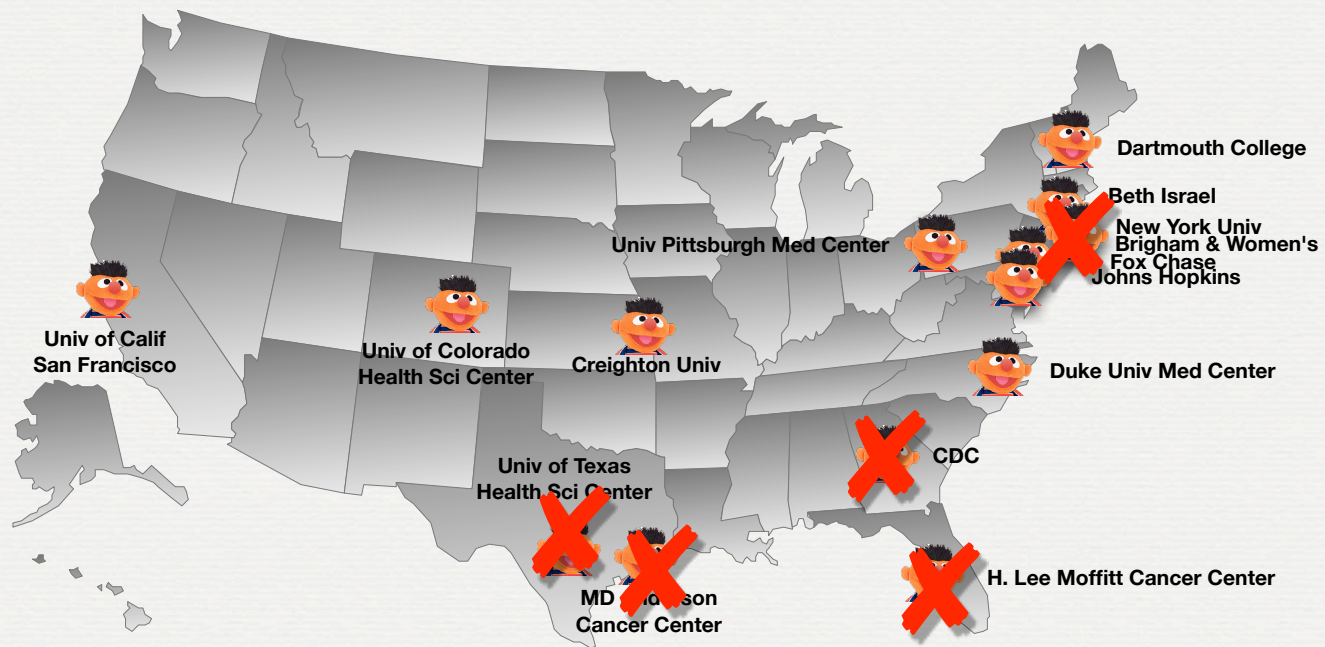 - Caching allowed

CACHING

TODAY

- Robust HTTPS/REST architecture

- Nightly caching: resilience and performance

- Automated QA mechanism: tests sites admin functions, speed of queries

- Jeff Pittman QA mechanism: data quality

- 15 sites

15 SITES

Dartmouth College

Beth Israel

New York Univ

Brigham & Women's

Fox Chase

Johns Hopkins

Univ Pittsburgh Med Center

Univ of Calif
San Francisco

Univ of Colorado
Health Sci Center

Creighton Univ

Duke Univ Med Center

Univ of Texas
Health Sci Center

CDC

MD Anderson
Cancer Center

H. Lee Moffitt Cancer Center

REALITY

CURRENT STATUS

- Creighton: quantities show "n/a"

- Fox Chase: suddenly no results

- Colorado: collection dates "n/a"

- Dartmouth: errors on blood+serum +ppt w/o cancer

- Duke: ppt w/o cancer shows ppts with ages at diagnoses

- Johns Hopkins: moving offices

- NYU: real data not available

- MD Anderson: no longer part of ERNE

- Moffitt: no longer part of ERNE

- CDC: never yet online

- San Antonio: needs rebuilding

PLANS

How to make ERNE better

DATA QUALITY

- Milestone date: **2008-Sep-5**

- Goals:

  - Get real data into NYU

  - Profile Fox Chase and optimize queries

  - Resolve discrepancies between quick search and advanced search

- Confirm correct ages in Creighton remapping

- Resolve multiple ages at Duke

AUTOMATE QA

- Milestone date: 2008-Sep-12

- Goals:

  - Implement analysis of unproductive searches

    - Timeouts

    - Errors

  - Measure kinds of searches

- Compare cache/live conherency

- Relieve Jeff Pittman

CONNECT CDC

- Milestone date: 2008-Sep-19

- Goals:

  - Connect CDC!

- Software passes muster

- Upgraded for JDK 6

- Why no further progress?

CATISSUE INTERFACE

- Milestone date: 2008-Oct-31

- Goals:

  - Finalize decisions on handling mis-mapped logical entities

  - Re-architect wrapper based on new caTissue architecture

  - Implement wrapper

- Test wrapper

- Make available for download

CONNECT UCSD

- Milestone date: 2008-Nov-21

- Goals:

  - Hold get-together meeting

  - Map

    - and review

  - Develop query handler

- Deploy

  - And test

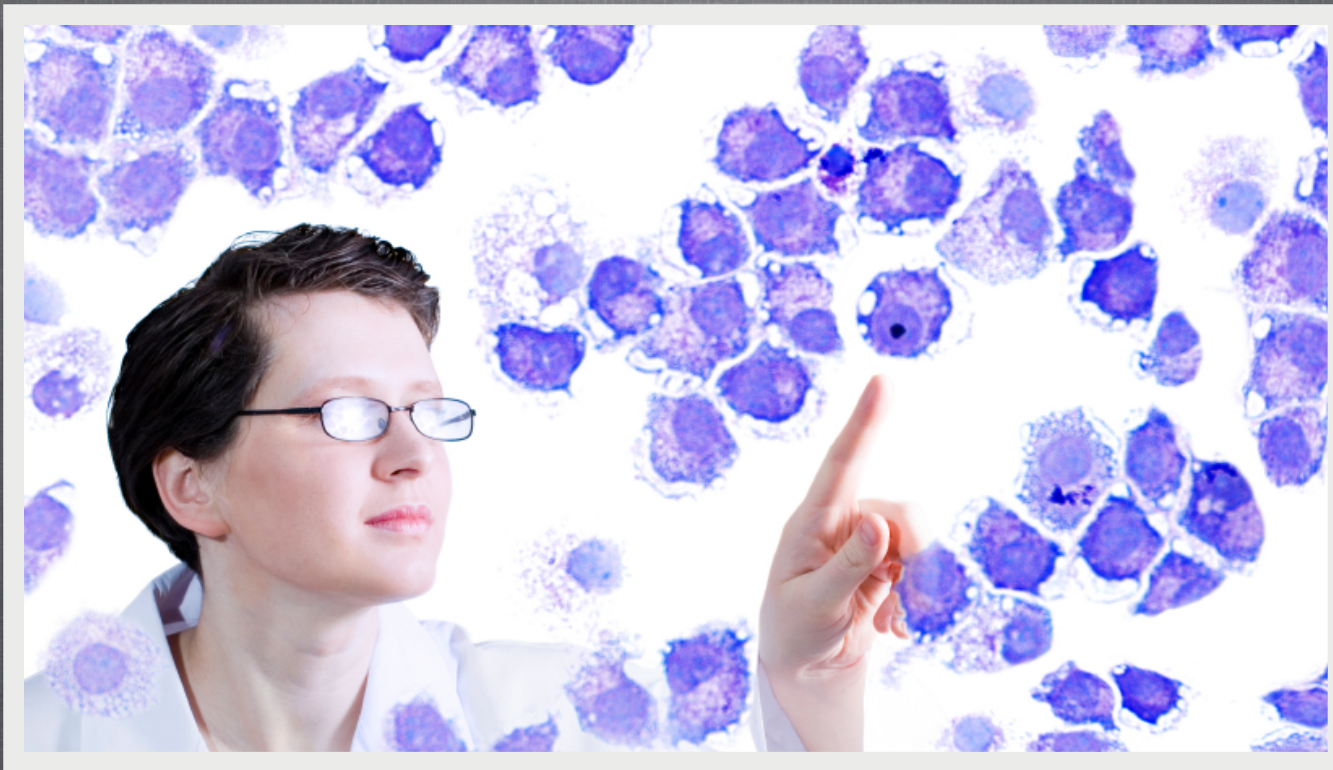- Add to QA

RECONNECT U TEXAS HSC

- Milestone date: 2008-Dec-12

- Goals:

  - Re-map

  - Review and approve mapping

  - Develop query handler

  - Deploy

- Add to QA

40K SPECIMENS AT DARTMOUTH

- Milestone date: 2009-Feb-27

- Goals:

  - Dartmouth has half a dozen new protocols

    - And specimens

    - That they *want* to share!

MISSING MILESTONES

- New EDRN sites? Old EDRN sites?

  - Moffitt, MD Anderson

- Software quality certification?

  - To avoid future CDC-style hurdles?

- Client authentication?

- Nicer user interface? Better portal integration?

QUESTIONS?

Let's discuss!